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This table lists current RTP Series and their associated resin systems. RTP Company specialty compounds are assigned a Series number (100, 200, etc.) based on the primary thermoplastic resin used in the formulation.

[Data Search]

Selection of a number in the first column of the table will take you to a subordinate page where you may view, download or print a wide range of product data sheets. These data sheets are representative of our custom compounding capabilities and are designed to provide you with comparative information.

We create thousands of compounds each year based on individual customer and application needs. For technical support or assistance with a particular design or molding issue, please contact our engineering staff or use the People Finder to locate an RTP Company representative in your area.

- Our nomenclature guide explains RTP Company's product numbering system.
- Definitions of common properties that appear on data sheets.

RTP Series	Resin System	
RTP 100	Polypropylene	PP
RTP 200	Nylon 6/6	PA
RTP 200A	Nylon 6	PA
RTP 200B	Nylon 6/10	PA
RTP 200C	Nylon 11	PA
RTP 200D	Nylon 6/12	PA
RTP 200E	Amorphous Nylon	PA
RTP 200F	Nylon 12	PA
RTP 200G	Nylon 4/6	PA
RTP 200H	Impact-Modified Nylon 6/6	PA
RTP 300	Polycarbonate	PC

RTP 300B	High Flow Polycarbonate	PC
RTP 400	Polystyrene	PS
RTP 500	Styrene Acrylonitrile	SAN
RTP 600	Acrylonitrile Butadiene Styrene	ABS
RTP 700	High Density Polyethylene	HDPE
RTP 700A	Low Density Polyethylene	LDPE
RTP 800	Acetal	POM
RTP 900	Polysulfone	PSU
RTP 1000	Polybutylene Terephthalate	PBT
RTP 1100	Polyethylene Terephthalate	PET
RTP 1200	Polyurethane Thermoplastic Elastomer	TPU
RTP 1300	Polyphenylene Sulfide	PPS
RTP 1400	Polyethersulfone	PES
RTP 1500	Polyester Thermoplastic Elastomer	TPE
RTP 1700	Modified Polyphenylene Oxide	PPO
RTP 1800	Acrylic	PMMA
RTP 1800A	Polycarbonate/Acrylic Alloy	PC/PMMA
RTP 2100	Polyetherimide	PEI
RTP 2200	Polyetheretherketone	PEEK
RTP 2300	Rigid Thermoplastic Polyurethane	RTPU
RTP 2500	Polycarbonate/ABS Alloy	PC/ABS
RTP 2700S	Saturated Styrenic Elastomer	SEBS
RTP 2700U	Unsaturated Styrenic Elastomer	SBS
RTP 2800	Olefinic Thermoplastic Elastomer	TEO
RTP 2800B	Thermoplastic Vulcanizate Elastomer	TPV
RTP 3000	Polymethylpentene	PMP
RTP 3100	Perfluoroalkoxy	PFA
RTP 3200	Ethylene Tetrafluoroethylene	ETFE
RTP 3300	Polyvinylidene Fluoride	PVDF
RTP 3400	Liquid Crystal Polymer	LCP
RTP 3500	Fluorinated Ethylene Propylene	FEP
RTP 4000	Polyphthalamide	PPA
RTP 4000A	Hot Water Moldable Polyphthalamide	PPA
RTP 4100	Polyetherketoneketone	PEKK
RTP 4200	Thermoplastic Polyimide	TPI
RTP 4300	Polysulfone/Polycarbonate Alloy	PSU/PC
RTP 4400	High Temperature Nylon	HTN
RTP 4600	Syndiotactic Polystyrene	SPS
RTP 4700	Polytrimethylene Terephthalate	PTT

Data Sheets for Specific Product Groups

PowderFlo MIM Feedstocks - Structural

Glass Bubble Compounds - Structural

Nanocomposites Compounds - Structural

Long Glass Fiber Compounds - Structural

Electronic Encapsulation Compounds - Conductive
Inherently Conducting Polymer (ICP) Compounds - Conductive
Carbon Nanotube Compounds - Conductive
Thermally Conductive Compounds - Conductive
Anti-Static Compounds - Conductive
PermaStat® Compounds - Conductive
EMI/RFI Shielding Compounds - Conductive
ESD (Electro Static Dissipative) - Conductive
Extrusion Grade Compounds - Conductive
Non-Halogen FR Compounds - Flame Retardant
Fluoroguard® Lubricated Compounds - Wear Resistant
Aramid Fiber Compounds - Wear Resistant
Compounds for Gear Applications
Compounds for Pump Applications

Additional Resources & References
Chemical & Environmental Resistance of Thermoplastics
RTP Company Policy Regarding Medical Applications
Foam Concentrates & Molding Information
ASTM Tests - American Society for Testing and Materials

X-Series Products

RTP Company X-Series products, those that follow the numbering convention ##99 X #####, are our custom and/or proprietary formulations. Data sheets for these products are not generally available on our web site.

Can't Find It?

To obtain data sheets on specialty compounds not presented here, please contact our Marketing Communications staff. Call 507-454-6900 or **1-800-433-4787**, fax 507-454-2041, or e-mail **http://web.archive.org/web/20030906025401/http://www.rtpcompany.com/contact/docs.htm**.

Locate and contact the RTP Company representative for your area.	Contact us for additional information on any of our products.	A guide to our specialty compounding capabilities.	Read how our materials have helped solve application problems.
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Odd Light Bulbs

last updated slightly 6/17/2001.

Green, White and Blue Neon Lamps

These resemble neon lamps, but have a white phosphor coated onto the inside surface of the bulb. This phosphor glows green, blue, white or some kind of "warm white".

One version of this is the NE-2G, which is about the size of an NE-2H lamp, about 3/4 inch (19 mm.) long by about a quarter inch (6.3 mm.) in diameter. It is filled with a mixture of neon and xenon gases. Since the excited states of xenon have lower energy levels than those of neon, almost no neon atoms are excited. The glow discharge radiates almost entirely xenon radiation, including a very short wavelength UV that excites the green-glowing phosphor.

I recommend a series resistor of at least 56K with the NE-2G for use with 120 volts AC, at least 120K for use with 220 volts AC, and at least 150K for use with 240 volts AC. It may be a good idea to use a somewhat higher value resistor to prolong the life of the phosphor.

A similar but smaller bulb with a neon-krypton mixture is found in Radio Shack's 272-708 green "neon" lamp cartridge. This is not as bright as the NE-2G. If you can identify the resistor inside the cartridge (I have seen 56K and 100K ones here), I recommend adding a resistor in series to get a total resistance of 110K to get a good life expectancy.

The NE-2G is about half as bright as an NE-2H with equal current. This makes an NE-2G about a third as bright as an NE-2H since the NE-2H can take about 50 percent more current and still have a very long life. However, for night light applications, the green "neon" lamps have a possible advantage: night vision (scotopic vision) is very sensitive to the green light, much more so than to an equal number of "lumens" of red, orange, yellow, or incandescent light or even the yellow-green light of most green LEDs. Once you are dark-adapted, you may find one green "neon" lamp to easily illuminate one or two large rooms enough to find your way around in the dark.

There are white neon lamps also. One is available from Jameco (http://www.jameco.com/) with a catalog number of 146202. This lamp has a white phosphor like that of 4100K triphosphor fluorescent lamps and a neon-xenon mixture. The color of the emitted light is an orangish white.

UPDATE 1/28/2000 Some lamps like these have a mixture of mercury vapor and argon (or maybe another noble gas). I recently got a sample of a green nightlight used in Europe. It's spectrum shows mercury. It also does not reliably work at all at 120 volts AC and such lamps may only be widely used where the line voltage is 220-240 volts AC.

Apparantly Incandescent Germicidal/Ozone Bulbs

My information on these has moved to my UV Bulb document, http://www.misty.com/~don/uvbulb.html.

Spectrum Tubes

Spectrum tubes are basically short "neon" tubing. The more popular "Plucker" tubes can be found in some high school and college science labs. These are about a foot (30 cm) long. The central portion is about a third of this length and is quite narrow, about 6 mm. (1/4 inch) in outside diameter and one or two millimeters inside diameter. The end portions are about a half inch (13 or so mm.) in diameter and resemble those of "neon" tubing. These tubes come with any of several gases and vapors, and are used with a spectroscope to demonstrate the spectra of these gases.

Similar are "Geissler tubes", which have larger, sometimes coiled central portions.

The Plucker tubes require a few thousand volts with current limited to a few milliamps. Special power supplies for these are available, but generally expensive. An alternative is a neon sign transformer with a reduced voltage (about a quarter to half of normal) applied to its primary. These tubes also usually work well with Tesla coils. It is generally recommended to not have the average current exceed about 5 or 10 milliamps or so. Peak currents should generally be kept under 100 mA, preferably under 40 mA to minimize sputtering of the electrodes.

Extreme peak currents of many amps will make many of these gases glow a light blue or blue-white color, but the electrodes were not designed to make these tubes work as flashtubes. Any attempt at "flashtube" operation should be done sparingly and with low energy levels, preferably well under a joule.

Tubes containing hydrogen, helium, neon, argon, krypton, xenon, and mercury vapor (probably combined with one of the noble gases) are suitable for extensive experimental and demonstration use. Tubes with other gases (especially air, oxygen, water vapor, or ESPECIALLY any of the halogens) are more prone to internal corrosion and should be used sparingly and not expected to have a good life expectancy. The neon tube is the brightest of these and costs about 15, maybe 26 US$. These tubes are available at Edmund Scientific (1-609-573-6250) and some other scientific equipment suppliers.

Typical colors associated with various gases:

Hydrogen - Lavendar at low current, hot pinkish magenta if the peak current is near or over 10 mA.
Helium - Whitish orange. Has been reported to be grayish, bluish, or green-bluish white under some conditions, but I have not seen this.
Neon - Red-orange.
Argon - Violetish lavendar. Bright light blue at extreme peak currents.
Nitrogen - Similar to argon, slightly duller and often slightly more pinkish. Bright bluish white, usually whiter than argon, at extreme peak currents.

Oxygen - Violet-lavendar, dimmer than argon.
Krypton - Grayish dim off-white, may have some greenish tint. Bright blue-white at extreme peak currents. (I have not seen this gas glowing in this tube, but I have seen krypton glowing elsewhere.)
Mercury Vapor - Light blue.
Xenon - Grayish or blue-grayish dim white. Very bright green-bluish white at extreme peak currents, more green-blue in this tube than is typical of most flashtubes.
Water Vapor - Similar to hydrogen but dimmer.
Carbon Dioxide - Slightly bluish white, brighter than xenon unless peak current is really high.

Electroluminescent/"Limelight"/"Californeon"/"Indiglo" lights

An electroluminescent lamp is basically a capacitor with a "lossy" dielectric that includes some sort of phosphor to make light from part of the dielectric loss. They must have AC, or at least very unsteady DC, in order to work. These typically require somewhat high voltages. A minimum of something like 20 volts or so is needed to make them work, and these typically use 100-140 volts AC, up to 200 volts if the waveform is a square wave. At power line frequencies of 50-60 Hz, electroluminescent lamps are not bright, but last several years. To get more brightness, AC of higher frequencies of a few hundred Hz (possibly even a few KHz?) is needed.

The "Lime Light" is an electroluminescent night light that has an appearance something like a miniaturized TV set (with no controls, speaker, antenna, etc). It consumes some very small amount of power (I forget exactly) like about 1/16 watt. The screen glows with a slightly whitish, maybe slightly bluish shade of green roughly like that of many green traffic lights. The light output is a bit more than that of NE-2G green neon lamps, easily enough to illuminate even a large room or two for night vision. The luminous efficiency is comparable to that of incandescent lamps, although much higher for night vision.

"Californeon" is a name for flexible electroluminescent strips that can be worn by cyclists, joggers, Trick-or-treaters, partyers, etc. These come with an inverter that produces the necessary high voltage higher frequency AC from batteries. I believe these are the bright, slightly whitish green things I have seen before.

For more info on the web for "Californeon", go to Altavista (http://www.altavista.com) and do a simple search on californeon. You will get about a hundred hits including some places that sell this stuff.

Other suppliers of electroluminescent stuff include:

Flatlite.

Neontrim, which sells electroluminescent "wire".

Coollight, another supplier of "neon wire".

Elam, a manufacturer.

Some LCD computer screens used in laptop computers have electroluminescent backlights. These usually glow with a color roughly like that of a "cool white" fluorescent lamp. An inverter is used to supply AC with a voltage around 100 volts or more and a frequency in the hundreds of Hz or maybe one or two KHz. Some miniaturized TV sets also have electroluminescent backlights. So do a few building entry intercoms and maybe other things with LCD displays.

"Indiglo" is a brand name of smaller electroluminescent lighting devices used in some watches and a nightlight and maybe a few calculators and the like.

Some smaller screens have LED backlights.

Many computer screens and maybe a few TVs have fluorescent backlights. If you have a spectroscope, or even a diffraction grating or a CD to use as a diffraction grating (requires practice), you can tell the difference. Fluorescent lamps emit a spectrum containing mercury lines as well as the spectrum of the phosphor (which varies). The mercury spectrum has significant lines in the yellowish green and violetish blue, and weaker lines in the yellow and deep violet. Phosphor spectra vary, sometimes basically continuous and spanning most of the visible spectrum, sometimes consisting of bands. A few phosphor bands have been known to be very narrow, resembling lines. Such is the orange-red line/band found in the spectra of most compact fluorescent lamps.

Low Current Red LEDs

These are the first commercially successful variety of high efficiency red LEDs, becoming widely available in the mid or late 1970's. Unlike the more recent types of high efficiency red LEDs, these are efficient only at low currents of a few milliamps or less. The brightness is noticeably less than proportional to current as current increases above about 2 to 4 milliamps.

Low current red LEDs are made with gallium phosphide doped with zinc oxide. Other gallium phosphide LEDs glow green or yellow-green.

The spectrum of low current red LEDs is broad, including the entire visible red portion. Spec sheets often indicate a rather long peak wavelength around 690 nM, but this may be at low currents. The spectrum and color change with current, and usually seems to be mostly red wavelengths shorter than 690 nM. The color may be orange rather than red at currents around 20-30 mA, and the different color does not alone indicate any damaging conditions or overheating to the LED. When the color is orangish, a minor secondary spectral band appears in the green around 550-560 nM.

Most other LEDs are most efficient at currents over 10 milliamps. However, silicon carbide blue LEDs (without gallium nitride) are also most efficient at low currents. Indium gallium nitride ultrabright green, blue and white LEDs are also most efficient at lowish currents of a few milliamps.

"Neon" tubing that changes color

In a few places, you might find what looks like neon tubing, but it is dimmer and the color changes. The color typically cycles through some sequence of different colors.

The tubing is actually a "light pipe", which is usually a solid rod of transparant material or a bundle of optical fibers. Light that enters an end of a transparant rod can totally reflect back into the rod every time it hits the side, if its angle is more parallel to the axis of the rod than some critical angle. The rod/"tubing" for the color changing "neon" is slightly roughened, sanded, diffused, or otherwise made slightly "leaky".
The light entering the rod goes through (typically) some sort of mechanism of colored filters, probably some sort of rotating wheel with different color filter gels. The light source is, at least sometimes, a metal halide lamp.

There is another technology for color-changing neon tubing. The tubing in this case is actual gas discharge tubing, and the waveform applied is varied. The tubing has different ingredients. One waveform with a low peak current favors one color, and another waveform with a high peak current favors another color. For a little more info, check out:
http://web.archive.org/web/20030609062026/http://www.multineon.com/

Neodymium bulbs

A neodymium bulb is an ordinary incandescent light bulb, except that the bulb is made of a special bluish glass known as neodymium glass. Unlike other light blue filter materials that slightly attenuate a broad range of the spectrum from green through red, neodymium glass has a narrow absorption band in the yellow and yellow-orange. A neodymiub bulb glows with a whiter color like that of some halogen lamps.

The special effect of the neodymium glass filtering is to achieve more red and green output than usual for a light source of a given brightness and overall color. This causes red and green objects to look slightly brighter and more intensely colored than usual. The "triphosphor" type fluorescent lamps, including most compact fluorescent lamps, have a similar effect except that the fluorescents make bright pure reds look slightly orangish.

Neodymium bulbs are dimmer than unfiltered incandescent bulbs of the same wattage and life expectancy. Neodymium bulbs do not have increased output at any wavelength, except for an infrared band around 1064 nM where neodymium glass fluoresces.

Neodymium bulbs are available as the General Electric "Enrich" and "Reveal" bulbs At K-Mart and many other places where GE lightbulbs are sold. Other neodymium bulbs including other wattages are available from a few hardware stores, a few lighting/electrical supply shops and the like as well as a few companies offering high-priced premium daylight-like light sources, where the prices include hype including but not necessarily limited to health claims. Bulbs.com has a couple models. Major manufacturers include Bulbrite and Chromalux.

Tungar bulbs

Tungar bulbs are gas filled low voltage, high current rectifier tubes. The name refers to the fact that some are argon filled and have a tungsten filament cathode. There are mercury vapor versions of these also. Tungar bulbs were often used in car battery chargers before silicon diodes became available. Tungar bulbs typically rectified a few amps and had peak reverse voltage of a few tens of volts, and a forward voltage drop of maybe around 10 volts.
The cathode typically required about 1.5 volts at around 15 amps. Some mercury vapor models have more complex cathode structures that sometimes trapped mercury, and the cathode drew even nore current for several seconds to maybe a minute until the mercury was vaporized from the cathode structure and the cathode reached normal operating temperature.

In operation with current flowing from cathode to anode, argon filled models had a dim "fuzzball" of violetish colored glow around the filament. At least in some models, the filament was so much brighter that the argon glow was nearly invisible. Argon has a way of being unexpectedly dim at currents around a few tenths of an amp to several amps. In mercury vapor models, the glow is light blue and brighter. In at least one mercury model with a more complex cathode structure and two anodes, the cathode has a dim red-orange glow that is invisible through the brighter blue mercury glow. The mercury glow also

has a strange pattern, making this bulb possibly useful for B-grade science fiction movies.

Bulbs with purple/pink/orange-pink flowers/birds and green leaves

These light bulbs are most often approx. 3-1/8 inches (approx. 8 cm.) in diameter, and have one of the following:
Two roses glowing pink or pink-orange and leaves that glow green.
A flamingo that glows pink or pink-orange and leaves that glow green.
Two orchids that glow dim violet with leaves that glow a brighter green.
Now there are other forms, but the three above are most common.

The birds/flowers are covered with a glow discharge like that of neon glow lamps. The bulbs are filled with a gas mixture that is tailored to provide some shortwave ultraviolet to cause a green-glowing phosphor on the leaves to glow green.

Pink or pink-orange glow in these bulbs is achieved with a mixture of neon, argon, and krypton but mostly neon. The neon-argon mixture is a little more argon-rich than that optimized for easiest starting (maybe a few percent argon). The argon adds some violet and violet-blue spectral content to make the glow more pink and less orange. Some krypton is added to add some visible blue-violet spectral content and some very-short-wave UV.

It is interesting to note that a 99.5 percent neon, .5 percent argon mixture is popular in some neon lamps as a "Penning" mixture that ionizes more easily than neon or argon alone. The cathode glow in these lamps is orange, in fact more yellow than the color of pure neon. The "electron temperature" is reduced, and the spectral output is shifted away from all visible lines and towards the infrared argon lines. The violet and violet-blue argon lines are extremely weak here. For some reason, the strongest yellow line of neon is weakened less than other neon lines are, making the neon color more yellow. In lamps with 99.5 percent neon, .5 percent argon and a main discharge column (such as many sodium lamps when first started), the color is more magenta than that of pure neon.

In the bulb with violet orchids, the gas mixture is argon and xenon. The visible spectral output is almost entirely that of argon, and the glow is argon violet. The xenon produces very-short-wave UV. I have at times seen the spectrum of barium from occaisional bright spots in the glow, and believe the barium is a treatment to favor glow forming on particular parts of the electrodes, or it may be a getter material.

The shortwave UV is very completely blocked by the glass bulb, and is not any sort of hazard.

As for where to get these - Spencer Gifts, at many malls - check your phone book or this link.

Medium Pressure Mercury Vapor Lamps

To some, there is no such thing as a medium pressure mercury vapor lamp. Any mercury vapor lamp that is useful for anything would be either low pressure (mercury vapor pressure of .000001 to .0002 atmosphere, usually plus some inert gas) or high pressure (.05 atmosphere to hundreds of atmospheres).

However, there is a type of mercury vapor lamp usually called a medium pressure mercury vapor lamp. The arc tube is quartz and anywhere from 5 to as much as 77 inches (12 to 195 cm) long. The power input is high, typically 200 to 400 watts per inch of arc length, or 80 to 160 watts per centimeter of arc

length. The pressure is around an atmosphere or somewhat less. So it can be said that this is a specialty type of high pressure mercury vapor lamp.
These lamps are usually used in industrial applications requiring large amounts of ultraviolet, such as some graphic arts and printing applications. There is a fair amount of UV in the mercury line clusters at 365-366 nM and 313 nM. Please note that the 313 nM wavelength is UV-B and can harm eyes and cause severe sunburn. Please note that at close range, the 365-366 nM UV may not be completely safe to skin for prolonged exposure or for those taking photosensitizing prescription drugs (ask your pharmacist). Large amounts of 365-366 nM UV are not completely safe for eyes.

Cold Cathode Fluorescent Tubes (small and large)

Most fluorescent tubes are of the "hot cathode" type. In a hot cathode fluorescent tube, the cathode is thermionically emissive and the typical "cathode fall" (voltage drop to get an electron dislodged from metal and into the gas discharge) is about 10 volts.

There are some oddball fluorescent lamps known as "cold cathode" fluorescent lamps, which are lower current ones with non-thermionic electrodes and a much higher cathode fall of over 50 volts.

The original cold cathode fluorescent lamps were basically slightly oversized white "neon" tubing with a largish diameter around 3/4 inch (20 mm.), and with current around or a little over 100 milliamps. Most of these tubes were long and U-shaped.

Nowadays, there are miniature cold cathode fluorescent lamps. Most of these are 3 to 6.4 mm. (1/8 to 1/4 inch) in diameter and usually take a current around 5 milliamps (sometimes as low as 2.5 mA). These are mostly used as backlights for LCD screens in laptop computers and the like. (NOTE: Some laptops use smaller standard and/or compact fluorescent lamps and some use electroluminescent panels.) A few miniature cold cathode fluorescent lamps are used in other applications such as solar powered lawn lights.

There are a few blacklight versions of miniature cold cathode fluorescent lamps.

A major manufacturer of miniature cold cathode fluorescent lamps is JKL Lamps.

Xenon flashlight bulbs and other xenon incandescent bulbs

There are some incandescent bulbs such as some flashlight bulbs with xenon in them. Some halogen bulbs including some automotive headlight bulbs have xenon in them also. But these are all incandescent lamps and not arc lamps. There is an advantage, usually minor, in using xenon instead of the usual argon-nitrogen mixture or plain argon (or sometimes krypton) in these.

More info on incandescent lamps with xenon are in my Xenon Filled Incandescent Lamp Page.

There are HID (electric arc) automotive headlight bulbs, and they do contain xenon but these are a kind of metal halide lamp. The xenon is an active ingredient used to produce some usable white light until the bulb warms up enough for other active ingredients to evaporate.

More info on automotive headlight HID bulbs is in my Automotive Xenon Metal Halide Page.

More info on xenon lamps is in:

my Short Arc Lamp Page.
my page on making xenon glow continuously.
my xenon top page, mostly on xenon strobes and flash units.

Some general lighting technical info, especially discharge mechanics.
Back up to Don's Lighting Index Page.
Back up to Don's Home Page.

Written by Don Klipstein.

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Acrylonitrile Butadiene Styrene

Advantages

1.Dim ensional stability
2.Toug hness -- even at low temperatures
3.C hemical resistance

Limitations

1.P oor weatherability
2.P oor solvent resistance
3.Hig h smoke generation when burned

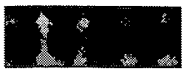
The ABS three monomer system can be tailored to yield a good balance of properties. Basically, styrene contributes ease of processing characteristics, acrylonitrile imparts chemical resistance and increased surface hardness, and the butadiene contributes impact strength and overall toughness.

ABS is considered the best of the styrenic family. It is hard, tough and rigid.

Glass-reinforced ABS has improved properties over the non-reinforced resin. This advantage opens a wide range of high performance opportunities, particularly in applications requiring high strengths, rigidity and dimensional stability.

ABS that contains 40% glass fiber exhibits 15,000 psi tensile strength, 20,000 psi flexural strength and 1.3 million psi modulus. It also has the highest heat deflection temperature of the styrenic family and low mold shrinkage.

ABS is severely attacked by some solvents. Prolonged exposure to aromatic solvents, ketones and esters should be avoided. This poor resistance to solvents does allow solvent bonding as a means of assembly.

Locate and contact the RTP Company representative for your area.	Contact us for additional information on any of our products.	Read how our materials have helped solve application problems.	Detailed product information for our most popular materials.
			

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Polycarbonate

Advantages

1.C reep resistance
2.Toug hness
3.Dim ensional stability

Limitations

1.P oor chemical resistance
2.P rocessing difficulties
3.L ow fatigue endurance

Polycarbonate possesses excellent impact strength, high heat resistance and good dimensional stability. It was one of the first thermoplastics to offer these properties. Although it is stable to water, mineral and organic acids, it is partially soluble in aromatic hydrocarbons, soluble in the chlorinated ones, and decomposes in strongly alkaline substances. It has good electrical properties.

The strength and dimensional stability of polycarbonates are further enhanced with fibrous glass reinforcement.

Reinforcement with 40% glass reduces the thermal expansion to 1.0 in/in/degrees F x 10E-5 (1.8 cm/cm/degrees C x 10E-5), which is below that of most thermoplastics and some metals. The tensile modulus is increased fivefold. Flexural, tensile and compressive strengths are doubled. Mold shrinkage is reduced, making it possible to produce very precise parts.

High Flow Polycarbonate (300B Series)

High flow polycarbonate compounds are capable of producing parts less than 0.040 inches (1 mm) in thickness. They have good dimensional stability. Their strength and stiffness are comparable to standard polycarbonate. Impact properties, however, are reduced when compared to standard flowing polycarbonate.

Locate and contact the RTP Company representative for your area.	Contact us for additional information on any of our products.	Read how our materials have helped solve application problems.	Detailed product information for our most popular materials.
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